

PESTICIDE USE AT THE AGRICULTURAL/URBAN INTERFACE

“Grassroots Effort Yields Promising Crops”

The use of pesticides on agricultural lands has a direct effect on the quality of life of residents in surrounding neighborhoods, particularly on children who attend schools nearby. The Grand Jury reviewed reports from concerned citizens and measures that were adopted as a result. We also reviewed health and safety concerns regarding those living and working within the agricultural/urban interface.

ORIGIN

The Grand Jury recognizes that as San Luis Obispo County continues to expand its population, there will inevitably be conflicts between the agricultural community and developing residential areas. This study was initiated to explore safety concerns inherent in this growth.

AUTHORITY

California Penal Code §925 states: “The grand jury shall investigate and report on the operations, accounts, and records of the officers, departments, or functions of the county including those operations, accounts, and records of any special legislative district or other district in the county created pursuant to state law for which the officers of the county are serving in their ex officio capacity as officers of the districts.”

METHOD

The Grand Jury took the following steps in conducting this inquiry:

- Interviewed the County Agricultural Commissioner (CAC) and staff from the department, together with staff from the California Department of Pesticide Regulation (DPR);
- Reviewed information concerning pesticides, application methods, and the effects of specific chemicals on human health;
- Interviewed members of Neighbors -At -Risk (NAR), a grassroots organization;
- Viewed a presentation by the Environmental Center of San Luis Obispo (ECOSLO), a local environmental action group, on pesticide exposure and school safety issues;

- Studied the recommendations of the Pesticide Task Force and the responses generated by CAC;
- Examined a current map of school buffer zones prepared by CAC (Appendix A); and
- Reviewed legislation and regulations governing pesticide use in California (Appendix B).

NARRATIVE

Between 1998 and 1999, a residential community of 27 homes was established in the community of Oceano at South Elm and Lower Pike, adjacent to a 30-acre strawberry field about a mile from the ocean. Within the ensuing year, many residents reported respiratory illnesses, asthma, rashes, headaches, and other flu-like symptoms. They suspected they had been exposed to the pesticide methyl bromide, which they learned was being applied to the adjacent strawberry field. In February 2002, a grassroots organization, NAR was formed. Its goal was to monitor pesticide use and community reaction and report the findings to the CAC and the Public Health Department.

Partly as a result of NAR's concerns, the San Luis Obispo County Public Health Department, with the Health Commission, formed the Task Force on Health and Pesticide Use. The task force was composed of Health Commission members, agricultural representatives, and community members who met over a period of almost two years. While acknowledging the importance of supporting and preserving agricultural land in the county, the task force also recognized the problems inherent in the ag/urban interface. The result was a series of recommendations, which are paraphrased below:

- I. There is a need for a simple and sensitive protocol to respond to complaints from private citizens who believe they have been exposed to pesticides.
- II. The CAC should continue to mediate concerns between local growers and neighbors and provide opportunities for growers and neighbors to meet in non-adversarial settings, such as Open Farm events.
- III. The CAC and the Public Health Department should jointly identify every educational and childcare facility within 500 feet of agricultural fields. A protocol of voluntary

notification was established in which a grower or groundskeeper must alert a neighboring institution whenever they are planning to fumigate the soil or spray pesticides.

- IV. The Health Commission was urged to contact the Department of Pesticide Regulation to support standardization of pesticide drift testing at the state level.
- V. As methyl bromide is replaced with less toxic alternatives, the CAC should carefully monitor the new generation of pesticides.
- VI. The Health Department should take a more visible role in pesticide exposure cases and provide education about rights, resources, symptoms and medical options in cases of pesticide exposure.
- VII. The CAC's current "Train-the-Trainer" program to ensure the safety of workers in the fields was commended and should continue on a regular basis.
- VIII. The Integrated Pest Management program adopted by the CAC was commended. It was recommended that all Parks and Recreation Departments adopt a similar protocol and that the County Superintendent of Schools monitor each school district for compliance with the Healthy Schools Act.
- IX. The Task Force supported the Montreal Protocol, which will lead to the worldwide ban of methyl bromide.
- X. It was recommended that the Task Force on Health and Pesticide Use be revived every three years as a necessary guardian of the public's wellbeing.

The CAC has been responsive to the Health Commission, the Task Force on Health and Pesticide Use and the public in general. The CAC has authority and responsibility regarding pesticide application in San Luis Obispo County. The CAC can enforce rules and regulations authorized by the state (DPR) regarding the use of pesticides, but cannot deny legal pesticide applications. It has the authority to place conditions on the use of restricted pesticides, but has limited authority when considering the use of non-restricted pesticides. San Luis Obispo County and the State of California have agreed to maintain a balance between agriculture and population growth. With that agreement comes the responsibility to monitor growing methods, which will minimize hazards to public safety.

School Safety: The threat of pesticide exposure to children is of particular concern. The CAC works with the Public Health Department to maintain a database and map of all schools and licensed childcare facilities within 500 feet of an agricultural field. In February 2004, the CAC mailed a good neighbor policy to all identified growers and applicators. The “Suggestions for Pesticide Applications Near Schools” handout ((Appendix C) continues to be distributed. The concern is that these measures are, by definition, “suggestions” and compliance is voluntary.

In 1999, the Cuyama Elementary School in Santa Barbara was evacuated and closed as a result of pesticide drift involving metam sodium, a highly volatile and toxic pesticide. Staff and children developed symptoms of pesticide exposure from its application to a nearby carrot field. In 2000, Mound Elementary School in Ventura County experienced drift from an adjacent orchard where another pesticide, Lorsban, was applied. This school was also evacuated and temporarily closed. Schools in San Luis Obispo County are also subject to methyl bromide applications (Appendix D).

In October 2005, 60 people in the Creekbridge neighborhood of Salinas in Monterey County experienced eye and throat irritations. A fumigant pesticide, chloropicrin, had been applied through drip irrigation to a strawberry field about 1200 feet from the homes. The Monterey CAC said that a mistake was made causing the chemical to spread through the air. The California DPR has documented 142 ag-related pesticide illnesses in Monterey County between 2000 and 2003. Cases in San Luis Obispo County have been documented at 53 during the same time period.

FINDINGS

Finding 1: California grows more than 85% of the nation’s strawberries and other methyl-bromide dependent crops. San Luis Obispo County growers planted 800 acres of strawberries in 2004. In 2005, 18 restricted materials permits were issued for the use of methyl bromide. Besides its toxicity, methyl bromide is a significant contributor to the ozone depletion in the atmosphere. The use of this pesticide continues despite the fact that the U.S. has signed the Montreal Protocol treaty, which promised to ban the use of methyl bromide by 2005. Efforts are still in progress on both the federal and the state levels.

Finding 2: Growers are subject to obtaining use permit, being inspected and fined for violations ranging from fifty to many thousands of dollars depending on the nature of the non-compliance.

Finding 3: All schools are considered “sensitive sites”. School safety issues that have been addressed include parental information regarding spraying schedules, the creation of buffer zones around schools and childcare centers and mandatory conditions on restricted pesticide application when children are present.

Finding 4: The CAC and Public Health Department have coordinated efforts to update their database of childcare facilities in order to prevent pesticide exposure to this most vulnerable population.

Finding 5: The Environmental Resource Section (land use) of CAC’s office is periodically requested by the Planning Department to provide input regarding a suitable location for a new school. This information, which takes into consideration the proximity to existing commercial agriculture, is often disregarded. New schools continue to be placed near large agricultural venues.

Finding 6: The Task Force on Health and Pesticide Use recommended that they meet every three years.

Finding 7: Legislation at the state level seeks to protect all citizens against pesticide drift, and recently SB 391 was introduced to provide for medical reimbursement for pesticide-related illnesses.

RECOMMENDATIONS

Recommendation 1: The Grand Jury strongly recommends that less toxic materials be used to replace methyl bromide and that the Board of Supervisors actively support the Montreal Protocol. (Finding 1)

Recommendation 2: Fines imposed on growers should be reviewed and made stringent enough to deter infractions of all regulations. (Finding 2)

Recommendation 3: Restricted pesticides should be prohibited on school grounds. School officials should adhere to the principles outlined in the Healthy Schools Act of 2000 (AB 2260 and AB 1006) until the long-range effects of pesticides on children’s growth patterns can be

documented. Buffer zones around schools should be broadened beyond those specified on the manufacturer's label. (Finding 3)

Recommendation 4: The annual updating of childcare locations is an important part of protecting children. Mandatory annual updating should be the responsibility of the office of the CAC. (Finding 4)

Recommendation 5: Recommendations from Environmental Resource Section should be an essential part of any new school project's planning. (Finding 5)

Recommendation 6: The Grand Jury recommends that the Task Force on Health and Pesticide Use meet annually for the purpose of review and recommendations. (Finding 6)

Recommendation 7: The Grand Jury urges all concerned citizens to contact their local representatives and urge them to enact and support legislation that will further protect school sites and the surrounding residents from future exposure and contamination. (Finding 7)

CONCLUSION

The Grand Jury would like to commend the CAC for its outreach to the public: the creation of a HOTLINE and the distribution of handouts describing how pesticides are regulated, how to report complaints, and measures to reduce pesticide use in the home. This agency performs the important job of bringing neighbors and growers together to cooperate on common problems. In addition, CAC coordinates with Santa Barbara County to maintain consistency in regulating pesticide use throughout the region.

The Grand Jury would like to acknowledge the grassroots efforts of Neighbors-At-Risk for taking a proactive stance on this issue as well as ECOSLO for their work in increasing public awareness. We also commend the Public Health Department for creating the task force, for working with CAC, and for providing training to medical professionals in schools and hospitals.

As the county's population increases, the agricultural/urban clash will intensify. Land use decisions, which ensure both the grower's "right to farm" and the public's health, need to be protected. California's goal is to protect commercial agriculture as an essential component of

the state's economy. The Grand Jury hopes this county is committed to maintaining a balance between growing crops and a growing population.

REQUIRED RESPONSES

- ø **The San Luis Obispo County Agricultural Commissioner: Due 05/03/06 (Findings 2, 3 & 4 and Recommendations 2, 3 & 4)**
- ø **The San Luis Obispo County Planning Department: Due 05/03/06 (Finding 5 and Recommendation 5)**
- ø **The San Luis Obispo County Public Health Department: Due 05/03/06 (Finding 6 and Recommendation 6)**
- ø **The San Luis Obispo County Board of Supervisors: Due 06/07/06 (Findings 1 through 6 and Recommendations 1 through 6)**

APPENDICES

Appendix A - Map of School Buffer Zones

Appendix B – Legislation Governing Pesticide Use in California

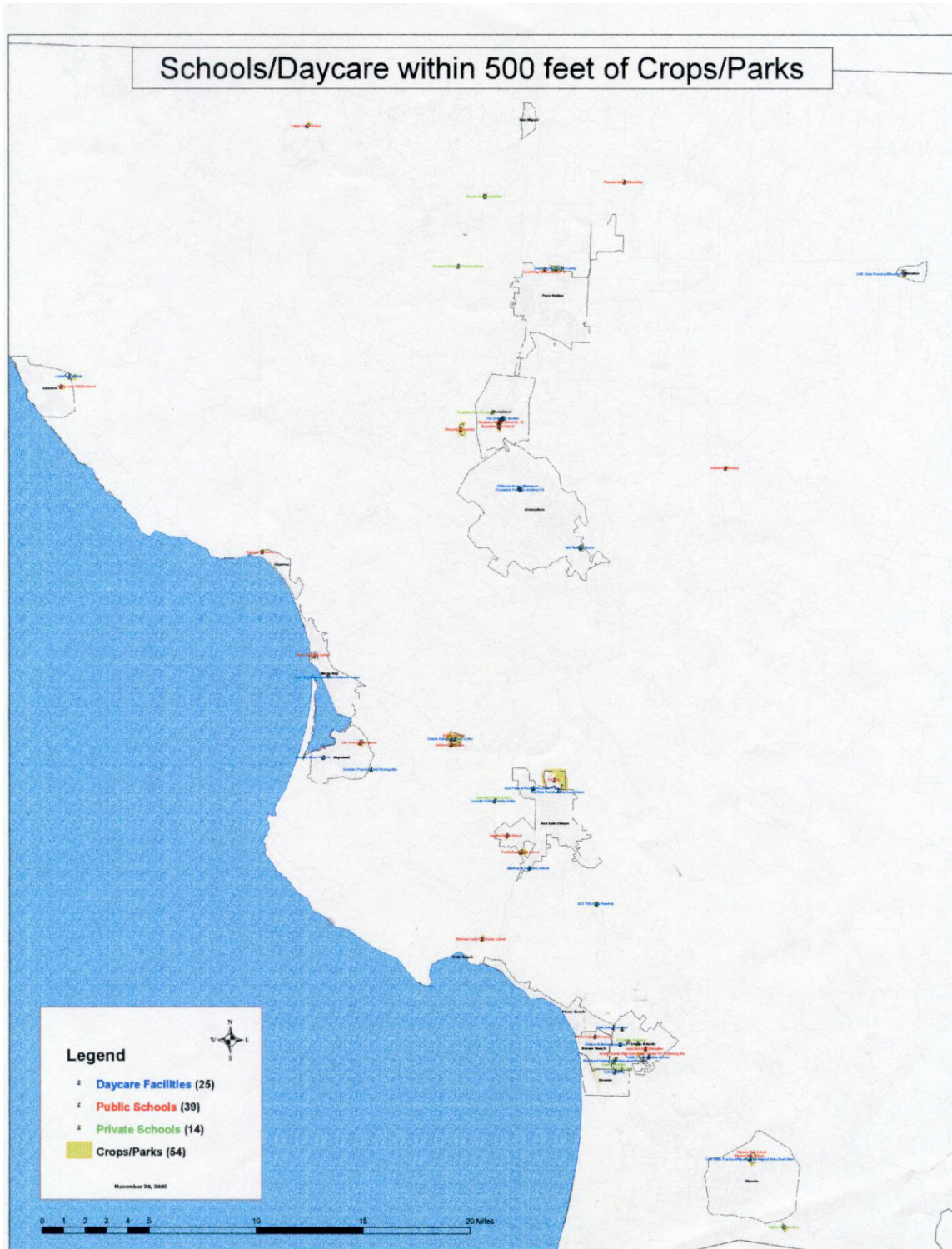
Appendix C – “Suggestions for Pesticide Applications Near Schools”

Appendix D - @ RISK Chart

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Appendix A

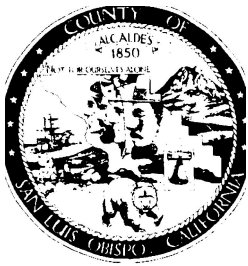


Appendix B

Legislation Governing Pesticide Use in California

1. TOXIC AIR CONTAMINANTS LAW, 1984. This law requires DPR to assess all pesticides as potential air contaminants and regulate them to protect public health.
2. HEALTHY SCHOOL ACT. This law advocates use of Integrated Pest Management programs to reduce chemical toxins in and around school grounds in order to minimize biological risk to children.
3. ABP 947, 2002. County Agriculture Commissioners may mandate buffer zones of one-half mile around sensitive sites, i.e. schools and hospitals.
4. CALIFORNIA FOOD AND AGRICULTURAL CODE, Section 12972.
The code expressly states measures should be taken to prevent substantial drifts to non-targeted areas.

Appendix C



COUNTY OF SAN LUIS OBISPO

Department of Agriculture/Masurement Standards

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◆PUBLIC RELATIONS - NEIGHBORS AND SENSITIVE SITES◆

SUGGESTIONS FOR PESTICIDE APPLICATIONS MADE NEAR HOMES, SCHOOLS, AND OTHER SENSITIVE SITES

Agriculturalists in San Luis Obispo County face many challenges in producing food and horticultural products that benefit everyone. Some of the greatest challenges are land use issues involving urban and rural residents and the farming community. A pesticide application near residents intensifies this challenge and often results in complaints and animosity between neighbors. It is our goal to assist pesticide applicators in developing ways to be sensitive to neighbors' concerns when using pesticides. The intent of these recommendations is to increase awareness and to encourage the safe use of pesticides in all settings.

◆ Suggestions and Possible *Voluntary* Solutions Concerning Pesticide Use in General:

1. Take the first step to talk with neighbors! Explain your agricultural operation: what you do, when you do things and why you do them. Explain the seasonal nature of possible increased traffic, noise, dust and pesticide use. If you use pesticides, *voluntarily* give your neighbors notification of pending applications. Explain that weather conditions usually dictate your schedule and predicting the exact time of a particular application may be difficult. If you make applications at night, notify your neighbors so they don't think you are hiding from them or anyone else. An easy way to provide notification to several neighbors is to help them develop a "phone tree call-down list" which means applicators call one neighbor and that person calls the rest of the neighbors. *Voluntary* notification is intended to keep neighbors informed and may also address the non-pesticide nuisance complaints such as early morning noise. Notification DOES NOT preclude mitigation of off-site drift. Explain to neighbors the reasons applicators wear protective clothing. If you hire applicators keep them informed of any arrangements you have made with neighbors.

2. Some complaints we receive involve odors from pesticide applications. Be aware if your pesticide has an obnoxious chemical odor. Though an odor may not be actual physical drift off your property, the smell can travel a long way, effecting multiple neighbors. Your smelly application at the very least can cause your neighbors to be awakened in the middle of the night or worse to have headaches and other illnesses. It is best to make your applications when there is some wind blowing away from neighbors and other sensitive areas. Be aware of weather conditions creating temperature inversions which restrict vertical air mixing causing both odors and small suspended droplets to remain close to the ground and move laterally off target in a concentrated cloud. We are obligated to respond to all complaints from the public.
3. Consider making applications when neighbors are normally gone for the day. Avoid making applications on weekends, holidays, or adjacent to roads during high traffic periods or during local events or festivals that may bring large numbers of bicyclists or joggers near your property.
4. Establish a relationship with the administrative staff of any nearby schools or other similar institutions. Keeping open communication lines can prevent many problems from occurring.
5. Explore alternative pest control methods that may reduce or eliminate the need for pesticides. Let your neighbors know the positive things you are doing like incorporating Integrated Pest Management strategies.
6. Ask your chemical supplier or PCA about new chemicals or alternative formulations that reduce the potential for off-site drift. For example, switch from a dusting formulation of sulfur to a wettable sulfur.
7. Consider planting a vegetative screen adjacent to neighboring property or leave an unplanted/untreated buffer area. If the topography and culture of the crop allows, change the planting direction of rows: it may be better to have length of rows rather than ends of rows along neighboring property lines.
8. For liquid applications, upgrade your spray equipment with nozzles that are designed to reduce drift. Make applications when airflow is away from neighboring property. Consider the use of hand-held spray equipment as a substitute to power equipment particularly in buffer zones.
10. If you would like some assistance, an Inspector from our office can conduct inspections of your pesticide applications, which may help verify the application was done in a safe and legal manner. Call us to request a "Voluntary Compliance Inspection" which gives you the opportunity to work with an Inspector to verify compliance and to discuss *voluntary* neighbor notification issues.
11. Get involved in land use planning processes that may affect your farming activities.

◆ **Restricted Pesticides:**

The County Agricultural Commissioner has the authority to condition the use of restricted material pesticides. Placing special conditions on Restricted Material Permits does this. In the development of permit conditions, County Ag Inspectors usually visit sites to be treated and work closely with applicators to evaluate and address sensitive sites. The proximity of occupied dwellings, application methods and equipment (aerial versus ground applications for example), alternative methods, topography of the site, and weather conditions are examples of factors evaluated. A sensitive site" designation by the Ag Inspector indicates a situation exists that may warrant extra precautions such as additional permit conditions. Neighbor notification may be required to inform the public about pesticide applications which are close to occupied dwellings, schools, etc. Applicators or growers, not staff from the Agricultural Commissioner's office, are responsible for neighbor notification.

◆ **Non-Restricted Pesticides:**

The County Agricultural Commissioner does not generally condition the use of non-restricted materials, unless the Commissioner determines that its use will present an undue hazard when used under local conditions. As with any pesticides, applicators are responsible to follow all label requirements and to avoid off-site drift. At times it may be necessary or just a good, neighborly approach for applicators to go beyond normal precautions including notification of neighbors of pending pesticide applications. Growers that have used this approach have had good success. Contact your industry association for linkage to peers that may assist you.

◆ **The California Public Records Act:**

The County Agricultural Commissioner frequently receives requests from the public for information about pesticide applications. Examples of commonly requested documents include copies of growers' Restricted Materials Permits, pending Notices of Intent, Use Reports, records of enforcement action and investigations. These documents, and many others, are considered "public records". The California Public Records Act, (Government Code Section 6250-6268), mandates the Commissioner provide public records upon request. The requests must be made in writing. The cost for completion of these requests is recovered through a fee for computer time and photocopies. (In some situations, the Commissioner may notify you of documents that were released in response to a request).

Please let us know about creative solutions you have developed so we may pass them along to others. For more information contact one of our offices:

Arroyo Grande District Office: 473-7090 ◆ Templeton District Office: 434-5950
San Luis Obispo Main Office: 781-5910

Appendix D



ENVIRONMENTAL WORKING GROUP

THE POWER OF INFORMATION

California Issues

[EWG CA Home](#)

[Methyl Bromide](#)

[Children's Health](#)

[Pesticides](#)



Schools in San Luis Obispo County with 100 or more pounds of Methyl Bromide applied within 1.5 miles of the school

Schools in San Luis Obispo County				
Rank	School	City	Total enrollment	Pounds of methyl bromide applied within 1.5 miles
1	Lopez High	Arroyo Grande	163	11,053
2	Arroyo Grande High	Arroyo Grande	2,969	11,053
3	Harloe Elementary	Arroyo Grande	724	11,053
4	Oceano Elementary	Oceano	514	9,771
5	North Oceano Elementary	Grover Beach	599	6,227
6	Grover Beach Elementary	Grover Beach	515	6,227
7	Mesa Middle	Arroyo Grande	776	3,031
8	Branch Elementary	Arroyo Grande	277	2,208
9	Los Ranchos Elementary	San Luis Obispo	589	787